



ecology and environment, inc.

S I T E   S A F E T Y   P L A N

Version 988

A. GENERAL INFORMATION

Project Title: Venus Labs Project No.: 2T2051  
TDD/Pan No.: T05-9307-022/EIL 0319 SAA  
Project Manager: Lisa Graczyk Project Dir.: \_\_\_\_\_  
Location(s): 855 Lively Blvd., Wood Dale, FL  
Prepared by: Lisa Graczyk Date Prepared: 8-2-93  
Approval by: [Signature] Date Approved: 8-2-93  
Site Safety Officer Review: [Signature] Date Reviewed: 8-2-93  
Scope/Objective of Work: Collect surface water samples from a sewer & creek on site for CLP sample analysis. Possible drum/container sampling will take place.  
Proposed Date of Field Activities: 8-3-93  
Background Info: Complete: ☐ Preliminary (No analytical data available) ☒

Documentation/Summary:

Overall Chemical Hazard:	Serious <input type="checkbox"/>	Moderate <input type="checkbox"/>
	Low <input checked="" type="checkbox"/>	Unknown <input type="checkbox"/>
Overall Physical Hazard	Serious <input type="checkbox"/>	Moderate <input type="checkbox"/>
	Low <input checked="" type="checkbox"/>	Unknown <input type="checkbox"/>

B. SITE/WASTE CHARACTERISTICS

Waste Type(s):

Liquid ☒ Solid ☐ Sludge ☐ Gas/Vapor ☐

Characteristic(s):

Flammable/Ignitable ☒ Volatile ☒ Corrosive ☒ Acutely Toxic ☐  
Explosive ☐ Reactive ☐ Carcinogen ☒ Radioactive\* ☐

Other: \_\_\_\_\_

Physical Hazards:

Overhead ☐ Confined\* ☐ Below Grade ☐ Trip/Fall ☒  
Puncture ☒ Burn ☐ Cut ☒ Splash ☒  
Noise ☐ Heat Cold ☒ Stress ☐ Other: \_\_\_\_\_

\*Requires completion of additional form and special approval from the Corporate Health/Safety group. Contact RSC or HQ.  
HS018A(04/02/91)

Site History/Description and Unusual Features (see Sampling Plan for detailed description): Facility manufactures solvents. The facility is allegedly discharging illegally to sewers. The U.S. EPA is making a surprise visit to the facility on 8-3-93.

Locations of Chemicals/Wastes: Unknown

Estimated Volume of Chemicals/Wastes: Unknown

Site Currently in Operation

Yes: ☒

No: ☐

### C. HAZARD EVALUATION

List Physical Hazards by Task (i.e., drum sampling - explosion hazard, drilling - noise hazard, etc.) and number them. (Task numbers are cross-referenced in Section D)

Task/Physical Hazard Evaluation: 1. Site Reconnaissance - Trip/fall, Heat Stress, puncture  
2. Surface Water Sampling - Trip/fall, splash, puncture, heat stress  
3. Drum Sampling - Trip/fall, splash, puncture, heat stress

4.

5.

6.

7.

8.

Chemical Hazard Evaluation:

Compound	(ppm) PEL/TWA	Route of Exposure	Acute Symptoms	Odor Threshold	Odor Description
Benzene	1.0 / 0.1	IN, Eye, DA, SK, IH	Dizziness, V, N, BV IR, SKIN	5.00 ppm	aromatic
Vinyl Chloride	1 ppm	IN, IH, Eye, SK	IR, DR, AB, C	NA	faint, sweet, ether-like
1,1,1-Trichloroethane	350 / 350	IN, eye, DA, SK, IH	IR, N, DR, dizzy, confusing	390 ppm	chloroform-like, ether-like
Xylene	100 / 100	IN, Eye, DA, SA, IH	Dizziness, H, N, V, AB, IR	20 ppm	aromatic
Sulfuric Acid	0.25 / 0.25	IN, IH, DA, SK	V, N, H, Burns	0.25 ppm	odorless

Note: Complete and attach a Hazard Evaluation Sheet for major known contaminants. Codes for C.H.E. below:

AB = ABDOMINAL PAIN

AC = ACHES

AN = ANEMIA

BV = BLURRED VISION

C = COUGHING

W = WEAKNESS

H = HEADACHES

SB = SHORTNESS OF BREATH

DA = DERMAL ABSORPTION

DI = DIARRHEA

DS = DISTRESSED STOMACH

DP = CNS DEPRESSION

DR = DROWSINESS

CD = CONTACT DERMATITIS

LC = LOSS OF CONSCIOUSNESS

OTHER:

IH = INHALATION

IN = INGESTION

IR1 = IRR OF E/M/THROAT

IR = IRRITATION

E = EYES

DZ = DIZZINESS

RT = RESPIRATORY TRACT

A = OCULAR

SK = SKIN CONTACT

U = ULCERATION

V = VOMITING

M = MOUTH

CP = CHEST PAIN

N = NAUSEA

#### D. SITE SAFETY WORK PLAN

Site Control: Attach map, use back of this page, or sketch of site showing hot zone, contamination reduction, zone, etc.

Perimeter identified? [ ] [ ] Site secured? [ ] [X]

Work Areas Designated? [ ] [X] Zone(s) of Contamination Identified? [ ] [X]

Personnel Protection (TLD badges required for all field personnel):

Anticipated Level of Protection (Cross-reference task numbers to Section C):

	A	B	C	D
Task 1			←	X
Task 2			←	X
Task 3		X		
Task 4				

(Expand if necessary)

will upgrade if air monitoring indicates to do so.

Modifications:

#### Action Levels for Evacuation of Work Zone Pending Reassessment of Conditions:

- Level D:  $O_2$  <19.5% or >25%, explosive atmosphere >10% LEL, organic vapors above background levels, particulates >NA mg/m<sup>3</sup>, other NA
- Level C:  $O_2$  <19.5% or >25%, explosive atmosphere >25% LEL (California-20%), unknown organic vapor (in breathing zone) >5 ppm, particulates >NA mg/m<sup>3</sup>, other NA
- Level B:  $O_2$  <19.5% or >25%, explosive atmosphere >25% LEL (California-20%), unknown organic vapors (in breathing zone) >500 ppm, particulates >NA mg/m<sup>3</sup>, other NA
- Level A:  $O_2$  <19.5% or >25%, explosive atmosphere >25% LEL (California-20%), unknown organic vapors >500 ppm, particulates >NA mg/m<sup>3</sup>, other NA

Air Monitoring (daily calibration unless otherwise noted):

Contaminant of Interest	Type of Sample (area, personal)	Monitoring Equipment	Frequency of Sampling
Organic Vapors	Area	HNu	Continuous
% Oxygen	Area	Oxygen meter	Recon.
% LEL	Area	Explosimeter	Recon.
Radiation	Area	Rad-mini	Recon.

(Expand if necessary)

Decontamination Solutions and Procedures for Equipment, Sampling Gear, etc.:

All contaminated equipment will be washed in a clean solution and triple rinsed with distilled water. All wash & rinse water will be left on-site with prior permission from the site owner.





**SITE LOCATION**

**SITE LOCATION MAP**



Personnel Decon Protocol: A two wash tub system will be used. The first tub will be used for decontamination of clothing in alconox solution. The second tub will be used for rinsing in distilled water.

Decon Solution Monitoring Procedures, if Applicable: NA

Special Site Equipment, Facilities, or Procedures (Sanitary Facilities and Lighting Must Meet 29 CFR 1910.120): Neoprene gloves must be worn when handling preservatives.

Site Entry Procedures and Special Considerations: Permission will be obtained prior to site entry. Stay upwind of contamination when possible. The buddy system will be maintained at all times.

Work Limitations (time of day, weather conditions, etc.) and Heat/Cold Stress Requirements:

Work is restricted to daylight hours only and workers are to be monitored for heat/cold stress. When vermiculite is used to pack samples, dust masks will be worn.

General Spill Control, if applicable: NA

Investigation-Derived Material Disposal (i.e., expendables, decon waste, cuttings):

Investigative-derived materials will be decontaminated in accordance with procedures listed above. The decontaminated material will be bagged and left on-site in appropriate waste containers with prior permission of site owner/operator

Sample Handling Procedures Including Protective Wear:

After samples have been collected, the outside of the sample bottles will be decontaminated by washing (not submerging) the bottles in an Alconox solution and rinsing in distilled water. The protective clothing level (i.e. suits, gloves, boots) worn during on-site job activities will be maintained while decontaminating the bottles. Respiratory protection will be worn based on professional judgement. Latex gloves, at a minimum, will be worn while handling the bottles after decontamination.

Team Member\*

Responsibility

Lisa Graczyk

Team Leader

Karen Rydzewski

Site Safety Officer

Michael Kulikowski

Team Member

\*All entries into exclusion zone require Buddy System use. All E & E field staff participate in medical monitoring program and have completed applicable training per 29 CFR 1910.120. Respiratory protection program meets requirements of 29 CFR 1910.134, and ANSI Z88.2 (1980).

# E. EMERGENCY INFORMATION

(Use supplemental sheets, if necessary)

## LOCAL RESOURCES

(Obtain a local telephone book from your hotel, if possible)

Ambulance 911

Hospital Emergency Room Elmhurst Memorial Hospital, 708-833-1400, Emergency 708-941-4540

Poison Control Center Elmhurst Memorial Hospital, 708-941-4514

Police (include local, county sheriff, state) Wood Dale Police 708-766-2151, DuPage county sheriff 708-668-0900, State 708-742-3553

Fire Department 911 OR Local 708-766-2141

Airport O'Hare American Airlines 1-800-433-7300

Agency Contact (EPA, State, Local USCG, etc.) U.S. EPA

Local Laboratory NA

UPS/Fed. Express 1-800-238-5355

Client/EPA Contact Ruth Mancos 312-953-3193 + Alan Altur 312-884-0390

Site Contact Same NA

## SITE RESOURCES

Site Emergency Evacuation Alarm Method Horn

Water Supply Source To be supplied by the TAT

Telephone Location, Number to be determined

Cellular Phone, if available NA

Radio NA

ther NA

## EMERGENCY CONTACTS

1. Dr. Raymond Harbison (Univ. of Florida) ..... (501) 221-0465 or (904) 462-3277, 3281  
Alachua, Florida [REDACTED] (24 hours)
2. Ecology and Environment, Inc., Safety Director  
Paul Jonmaire ..... (716) 684-8060 (office)  
[REDACTED] (home)
3. Dean Tiebout, Regional Safety Coordinator, Chicago ..... (312) 663-9415 (office)  
[REDACTED] (home)
4. Jerry Oskvarek, Office Manager, Chicago ..... [REDACTED] (home)
5. Tom Kouris, TAT Leader, Chicago ..... (312) 201-3790 (office)  
[REDACTED] (home)
6. Pat Zwilling, ATATL, Chicago ..... [REDACTED] (home)
7. Ron Bugg, TAT Safety Officer, Chicago..... [REDACTED] (home)

HS018A(04/02/91)

#### MEDTOX HOTLINE

1. Twenty-four hour answering service: (501) 370-8263

What to report:

- State: "this is an emergency."
  - Your name, region, and site.
  - Telephone number to reach you.
  - Your location.
  - Name of person injured or exposed.
  - Nature of emergency.
  - Action taken.
2. A toxicologist, (Drs. Raymond Harbison or associate) will contact you. Repeat the information given to the answering service.
  3. If a toxicologist does not return your call within 15 minutes, call the following persons in order until contact is made:
    - a. 24 hour hotline - (716) 684-8940
    - b. Corporate Safety Director - Paul Jonmaire - home # [REDACTED]
    - c. Assistant Corp. Safety Officer - Steven Sherman - home # [REDACTED]
    - d. Chicago Health & Safety Manager - Dean Tiebout - home # [REDACTED]

#### EMERGENCY ROUTES

(NOTE: Field Team must know Route(s) Prior to Start of Work)

Directions to hospital (include map) Head north on Lively Blvd. to  
Devon. Drive east on Devon to 83 (Busse Hwy.). Drive  
South on Busse to North Ave. Head east on North ave.  
to hospital. Hospital will be on right hand side of road.  
Approximate travel distance is 10 miles.  
Emergency Egress Routes to Get Off-Site Lively Blvd.

# ELMHURST MEMORIAL HOSPITAL

200 Berteau Avenue in Elmhurst, just off North Avenue

For emergency care questions .....	941-4540
The Emergency Center at Elmhurst Memorial Hospital.	
For suspected poisonings .....	941-4514
Poison Hotline	
For help with alcohol or drug dependence .....	941-4577
The Treatment Center at Elmhurst Memorial Hospital	
For counseling or therapy .....	953-2900
Guidance Center, an affiliate of Elmhurst Memorial Hospital	
For home care information .....	941-7045
Elmhurst Memorial Home Health Care	
Do you need a doctor? .....	941-4504
Physician Referral Service	

8 3 3 - 1 4 0 0



Medical  
Excellence  
in a Care  
Environment



Founded in 1926, Elmhurst Memorial Hospital is committed to providing high quality family centered care. With 455 beds and bassinets, the hospital offers comprehensive inpatient and outpatient services to meet your specific health care needs. The Medical Staff, numbering over 425, represents the full range of specialties. More than 2,000 employees provide direct patient care as well as support functions, around the clock.

**Do You Need A Doctor**  
**CALL 941-4504**

Deron

SITE

Lively Blvd

Route 83

North Ave.



HOSPITAL



Ecology and Environment, Inc.  
Hazard Evaluation of Chemicals  
Region V - Chicago

CHEMICAL NAME: Benzene

DATE: 8/21/93

PROJECT: 222051

CAS No.:

DOT Class: 1114

Synonyms: Benzol, Benzole, Benzolene, Coal Tar Naphtha

Formula: C<sub>6</sub>H<sub>6</sub>

UN/NA #:

CHEMICAL PROPERTIES

Phys St: Liquid Boil Pt: 176.00 °F Ioniz Pot: 9.25 eV FI Pt: 12.00°F  
Mol Wt: 78.11 Melt Pt: 41.00 °F Vap Press: 75.00000 mmHg LFL: 1.30%  
Sp Gr: 0.88 Frz Pt: 42.00 °F Odor Thr: 5.00ppm UFL: 7.90%  
Stable: F Hazardous Polymerization will occur: F  
Odor: aromatic, pleasant, sweet  
Incompat/React: nitric acid, oxidizing agents, chlorine, bromine  
Solubility: Water-slightly, soluble in organic solvents

TOXICOLOGICAL PROPERTIES

Exposure Limits: TLV-TWA (ACGIH): 0.100 ppm PEL (OSHA): 1.00 ppm IDLH: 2000.00000ppm  
STEL: 1.00 ppm STEL: 5.00 ppm

Properties: CEILING: 25PPM/15MIN. ACCEPT MAX PEAK ABOVE CEIL

Tox Data: Inhalation: rat LC50: 1000ppm/7hr

Dermal: skin rbt 500mg/24H-MOUSE

Oral: rat LD50: 4394mg/kg

Carcinogen: human positive

Mutagen: exper

Reproduct.: exper

Aquatic: 5ppm/6hr/minnow/lethal/distilled water

Other Tox.: TARGET ORGANS: Blood, CNS, Skin, Bone Marrow, Eyes, Resp Sys

Routes of Exp.: Ingestion, Eye(Ocular), Dermal Absorption, Skin Contact, Inhalation

PERSONAL PROTECTIVE MEASURES

Respirators: APR: dusty/windy condit or known high concent or >1 but <5ppm; SCBA: >5ppm

Cartridge Type: GMC-H or AP3 (RADAL)

Protective Clothing: Coverall: Saranex Gloves: Silvershield-8hr, PVA-6hr, Viton-6hr (PVA degrade in water)

Spill Precautions: OSHA REGULATED CARCINOGEN.

FIRST AID

Inhalation: move to fresh air, give O2/CFR if nec, SEEK MEDICAL ATTENTION

Eye/Skin: remove contaminated clothes, flush areas w/water for 15 min, SEEK MEDICAL ATTENTION

Ingestion: Treat for shock, CPR if nec., SEEK MEDICAL ATTENTION

SYMPTOMS

Acute: dizziness, weakness, euphoria, headache, nau/vomt, tight chest, staggering, visual blurring, tremors, skin irritation/scaling/cracking

Chronic: loss of appetite, drowsy, nervous, pallor, anemia, petechiae, abnml bleeding, aplasia of bone marrow, leukemia, encephalopathy w/ataxia, tremulousness, emotional lability, diffuse cerebral atrophy

DISPOSAL, FIRE, SPILLS (see attached sheet)

Disposal: D Fire: 6,7

Leaks & Spills: 3,4,5,6,9

Decomposition Products: carbon monoxide, carbon dioxide

REFERENCES CONSULTED

OSHA Pocket Guide, Chris (vol. III), ACGIH TLV Booklet, RTECS

Other References: Sigma-Aldrich, Handbook of Poisoning, OSHA

Last Revision Date:

Chemical Classification: Aromatic Hydrocarbon

4/20/92

Ecology and Environment, Inc.  
Hazard Evaluation of Chemicals  
Region V - Chicago

ID# : 812193  
J : 272051  
CAS No. :  
DOT Class:

Synonyms: Battery Acid, Oil of Vitriol  
Formula: H2SO4  
UN/NA #:

CHEMICAL NAME: Sulfuric Acid

CHEMICAL PROPERTIES

Phys St: Liquid Boil Pt: 518.00 °F Ionz Pot: 0.00 ev FI Pt: 0.00°F  
Mol Wt: 98.08 Melt Pt: 37.00 °F Vap Press: 0.00100 mmHg LFL: 0.00%  
Sp Gr: 1.84 Frz Pt: 59.00 °F Odor Thr: 0.25ppm UFL: 0.00%  
Stable: F Hazardous Polymerization will occur: F  
Odor: odorless  
Incompat/React: organics, metals, water, chlorates, carbides, fulminates, picrates  
Solubility: miscible but highly reactive

TOXICOLOGICAL PROPERTIES

Exposure Limits: TLV-TWA (ACGIH): 0.24930ppm PEL (OSHA): 0.24930ppm IDLH: 19.93369ppm  
STEL: — STEL: —  
Other Properties:  
Tox Data: Inhalation: guinea: LD50: 18mg/m3  
Dermal: —  
Oral: rat: LD50: 2140 mg/kg  
Carcinogen: —  
Mutagen: —  
Reproduct.: —  
Aquatic: 24.5ppm/24hr/blugill/lethal/fresh water  
Other Tox.: TARGET ORGANS: Resp Sys, Eyes, Skin, Teeth  
Routes of Exp.: Ingestion, Dermal Absorption, Skin Contact, Inhalation

PERSONAL PROTECTIVE MEASURES

Respirators: AFR: dusty/windy condit or known high concent or >1 but <5ppm; SCBA: >5ppm  
Cartridge Type: GMB or GMB-H, GMC  
Protective Clothing: Coveralls: Saranex Gloves: Neoprene  
Special Precautions:

FIRST AID

Inhalation: move to fresh air, give O2/CPR as nec. SEEK MEDICAL ATTENTION  
Eye/Skin: Flush w/water for 15min, treat skin burns by applying dry, sterile dressing. SEEK MEDICAL ATTENTION  
Ingestion: Give milk or water in lg qty. DO NOT INDUCE VOMITING. SEEK MEDICAL ATTENTION

SYMPTOMS

Acute: severe burns to skin, eyes, respir. tract, cough, diffic. breathing, headache, bluish face/lips, salivation, abdom cramps, naus/vomit, tongue changes white to black and corrosion of teeth.  
Chronic:

DISPOSAL, FIRE, SPILLS (see attached sheet)

Disposal: N Fire: 2,12 Leaks & Spills: 1,4,6,9  
Decomposition Products:

REFERENCES CONSULTED

1. OSHA Pocket Guide, Chris (vol. III), ACGIH TLV Booklet, RTECS  
2. References: 1st Aid for Chem Accidents, Emerg. Resp. Guide, H/H Indus. Tox., Sigma-Aldrich

Chemical Classification: Inorganic Acids

Last Revision Date:  
04/18/89

Ecology and Environment, Inc.  
Hazard Evaluation of Chemicals  
Region V - Chicago

TE : 8/12/93

Job : ZTAOS 1

3 No. :

Class: 2831

Synonyms: Methylchloroform

Formula: CH3CCl3

UN/NA #:

CHEMICAL NAME: Trichloroethane, 1,1,1-

CHEMICAL PROPERTIES

Phys St: Liquid Boil Pt: 165.00 °F Ioniz Pot: 10.20 eV FI Pt: 0.00°F  
M Wt: 133.41 Melt Pt: -31.00 °F Vap Press: 100.00000 mmHg LFL: 7.00%  
Gr: 1.31 Frz Pt: -33.00 °F Odor Thr: 350.00ppm UFL: 16.00%  
Solubility: Insoluble in water; sol in acetone, benzene, carbon tet, methanol, ether  
Hazardous Polymerization will occur: F  
Odor: Sweetish, chloroform-like, etherish  
Compat/React: strong oxidizers, Al, magnesium, zinc, strong bases; K, Na, acetone, nitrates, U, yield strong rxns  
Stability: Insoluble in water; sol in acetone, benzene, carbon tet, methanol, ether

TOXICOLOGICAL PROPERTIES

Exposure Limits: TLV-TWA (ACGIH): 350.00000ppm PEL (OSHA): 350.00000ppm IDLH: 1000.00000ppm  
STEL: 450.00000ppm STEL: -  
Properties: Affect CNS, IRRITANT  
Toxicity: Inhalation: human LC50: 920ppm/70M  
Dermal: -  
Oral: rat: LD50: 10,300 mg/kg  
Carcinogen: suspect  
Mutagen: exper  
Reproductive: teratogen  
Aquatic: 75-150ppm/1 pinfish/TLm/Salt water-no time period  
Other Tox: TARGET ORGANS: CNS, Eyes, Nose, Liver, Kidneys  
Routes of Exp.: Ingestion, Eye (Ocular), Dermal Absorption, Skin Contact, Inhalation

PERSONAL PROTECTIVE MEASURES

Respirators: APR: dusty/windy condit or known high concent or >1 but <5ppm; SCBA: >5ppm  
Filter Type: GAC-H or AP3 (RADAL)  
Protective Clothing: Overall: PE Tyvek Gloves: Viton  
Precautions:

FIRST AID

Inhalation: move to fresh air, artif resp if nec, SEEK MEDICAL ATTENTION  
Eye/Skin: remove contad cloth, flush w/water 15min, wash skin with soap/water, SEEK MEDICAL ATTENTION  
Ingestion: give water, induce vomiting if conscious, SEEK MEDICAL ATTENTION IMMEDIATELY

SYMPTOMS

Acute: Irritation to eyes/skin/muc membranes, incoordination, nausea, confusion, drowsiness, poss loss of consciousness, dizzy; possible lung/brain damage from high concentrations  
Chronic: dermatitis, liver/kidney damage-minimal

DISPOSAL, FIRE, SPILLS (see attached sheet)

Disposal: A Fire: 3,7 Leaks & Spills: 6,9,11  
Decomposition Products: CO, CO2, HCl, Phosgene

REFERENCES CONSULTED

MSHA Pocket Guide, Merck Index, Chris (vol. III), ACGIH TLV Booklet, RTECS  
References: Sigma-Aldrich, Poison Handbook

Chemical Classification: Halogenated Hydrocarbon

Last Revision Date:  
05/10/89



VINYL CHLORIDE

The information in this sheet applies to workplace exposure resulting from processing, manufacturing, storing or handling and is not designed for the population at large. Any generalization beyond occupational exposures should not be made. The best industrial hygiene practice is to maintain concentrations of all chemicals at levels as low as is practical.

Chemical Names: Chloroethylene, chloroethene, ethylene monochloride, monochloroethene, monochloroethylene; CAS 75-01-4.

Trade Names: VC, VCM, Troviduer, and others.

Uses: In the manufacture of plastics, as a refrigerant, and in organic synthesis.

PHYSICAL INFORMATION

Appearance: Colorless gas; may be liquified by refrigeration or pressurization.

Odor: Faint, sweet, ether-like.

Minimum Detectable by Odor: 4000 ppm.

Behavior in Water: Slightly soluble.

Evaporation: Rapid.

HEALTH HAZARD INFORMATION

OSHA Standard: Average 8 hour exposure -- 1 ppm.

NIOSH Recommended Limit: Lowest reliably detectable level.

ACGIH Recommended Limit: Average 8 hour exposure -- 5 ppm.

Short Term Exposure:

Inhalation: Exposure at 8,000 ppm for 5 minutes can cause a feeling of intoxication, tiredness, drowsiness, abdominal pain, numbness and tingling in fingers and toes, pains in joints, coughing, sneezing, irritability and loss of appetite and weight.

Skin: Contact with liquid may cause frostbite; contact with vapor may cause irritation and rash. Absorption is possible through the skin.

Eyes: Can cause severe and immediate irritation.

Ingestion: None found.

Long Term Exposure:

May cause club-like swelling and shortening of finger tips. Skin may become thickened and stiff with coarse, whitish patches. Bones and joints of arms and legs may suffer damage. Liver and spleen damage may occur. Not all symptoms disappear after exposure stops.

Vinyl chloride has caused liver cancer in occupationally exposed individuals.

\*Prepared by the Bureau of Toxic Substance Assessment, New York State Department of Health. For an explanation of the terms and abbreviations used, see "Toxic Substances: How Toxic is Toxic" available from the New York State Department of Health.

EMERGENCY AND FIRST AID INSTRUCTIONS

Inhalation: Move person to fresh air. Give artificial respiration or oxygen as required. Seek medical attention.

Skin: Remove soaked clothing. Wash affected area with soap and water for at least 5 minutes. Seek medical attention if necessary.

Eyes: Wash with running water for at least 15 minutes. Seek medical attention.

Ingestion: Seek immediate medical attention.

FIRE AND EXPLOSION INFORMATION

General: Flammable. Fumes may travel long distances and flash back. Ignites at -108°F (-78°C).

Explosive Limits: Upper -- 33%, Lower -- 3%.

Extinguisher: Stop flow of gas. Use water to keep fire exposed containers cool.

REACTIVITY

Conditions to Avoid: High temperatures may cause breakdown to phosgene and hydrochloric acid. Avoid sources of ignition.

Materials to Avoid: Long contact with air may result in formation of unstable peroxides which are explosive. Corrosive to iron at high temperatures in the presence of water.

PROTECTIVE MEASURES

Storage and Handling: Protect against physical damage. Outside or detached storage preferred. Indoors, store in a cool, dry, well-ventilated area away from sources of ignition.

Engineering Controls: Provide ventilation or process enclosures. Sinks, showers and eyewash stations should be readily available.

Protective Clothing (Should not be substituted for proper handling and engineering controls): Goggles, gloves and impervious clothing should be worn if contact with vinyl chloride is possible.

Protective Equipment: For any detectable levels use a self-contained breathing apparatus with a full facepiece operated in a positive pressure mode or a supplied-air respirator with an auxiliary self-contained breathing apparatus, both with a full facepiece and operated in a positive pressure mode. For escape from a contaminated area use a gas mask providing protection against vinyl chloride or an escape self-contained breathing apparatus.

PROCEDURES FOR SPILLS AND LEAKS

Get all workers out of the spill area. Put on respirator and other protective clothing. Establish ventilation to keep levels below explosive limit. Remove possible sources of ignition. Move leaking cylinders to safe place in open air. For final disposal contact your regional office of the New York State Department of Environmental Conservation.

For more information:

Contact the Industrial Hygienist or Safety Officer at your worksite or the New York State Department of Health, Bureau of Toxic Substance Assessment, 2 University Place, Albany, New York 12203.

Ecology and Environment, Inc.  
Hazard Evaluation of Chemicals  
Region V - Chicago

DATE: / /

CHEMICAL NAME: Xylene, all isomers

MS No.:

Synonym: Dimethylbenzene, Xylol

Formula: C<sub>8</sub>H<sub>10</sub>

Class: FLAMMABLE

UN/NA #:

CHEMICAL PROPERTIES

Phys St: Liquid Boil Pt: 0.00 °C Ioniz Pot: 8.56 eV FI Pt: 81.00°F  
Mol Wt: 106.20 Melt Pt: 0.00 °C Vap Press: 9.00000 mmHg LFL: 1.00%  
Sp Gr: 0.86 Frz Pt: 0.00 °C Odor Thr: 20.00ppm UFL: 7.00%  
Stable: F Hazardous Polymerization will occur: F  
Odor: aromatic odor, sweet  
Incompat/React: strong oxidizers  
Solubility: practically insoluble in water

TOXICOLOGICAL PROPERTIES

Exposure Limits: TLV-TWA (ACGIH): 100.00000ppm PEL (OSHA): 100.00000ppm IDLH: 1000.00000ppm  
STEL: 150.00000ppm STEL: —

Properties:

Inhal: hum TGI: 200ppm

Dermal: —

Oral: rat LD50: 4300 mg/kg

Carcinogen: —

Mutagen: exper

Reproduct.: exper. teratogen

Aquatic: —

Other Tox.: TARGET ORGANS: CNS, Eyes, GI Tract, Blood, Liver, Kidneys, Skin

Routes of Exp.: Ingestion, Eye (Ocular), Dermal Absorption, Skin Contact, Inhalation

PERSONAL PROTECTIVE MEASURES

Respirators: AFR: dusty/windy condit or known high concent or >1 but <5ppm; SCBA: >5ppm

Cartridge Type: GMC-H or AP3 (RACAL)

Gloves: PVA, Viton (PVA degrades in water)

Precautions:

FIRST AID

Inhalation: move to fresh air, artif resp if nec, SEEK MEDICAL ATTENTION

Eye/Skin: flush w/water 15 minutes, wash skin with soap/water, SEEK MEDICAL ATTENTION

Ingestion: DO NOT INDUCE VOMITING; SEEK MEDICAL ATTENTION IMMEDIATELY

SYMPTOMS

Acute: vapor cause: dizziness, headache, cough, pulmonary distress/edema, nausea/vomiting, abdominal cramps, narcotic in high concent, mild skin irritant

Chronic: possible liver and/or kidney damage, pulmonary congestion. Ingestion may be fatal.

DISPOSAL, FIRE, SPILLS (see attached sheet)

Disposal: U

Fire: 6,7

Leaks & Spills: 3,4,5,6,9

Decomposition Products: CO, CO<sub>2</sub>

REFERENCES CONSULTED

NIOSH Pocket Guide, Merck Index, Chris (vol. III), ACGIH TLV Booklet, RTECS

Other References: NIOSH Guides, Sigma-Aldrich

Chemical Classification: Hydrocarbons, Aromatic

Last Revision Date:

05/10/89



# WASTE-DISPOSAL METHODS

The disposal methods outlined below are intended only as guides. We do not assume responsibility for their use. Careful consideration must be given to the chemical and physical properties of the substance. In addition, local laws and regulations may preclude the use of these methods which are primarily designed for small quantities. Observe all federal, state, and local laws.

The disposal of some chemicals may require deactivation or modification of the material by chemical means. Chemical waste-disposal reactions must be handled with the same care and consideration used with synthetic procedures. Appropriate consideration must be given to reaction conditions, i.e., stoichiometry, order and rate of addition, heat of reaction, evolution of gaseous products, pH, efficiency of stirring, rate of reaction, atmospheric sensitivity, etc.

Chemical waste-disposal reactions should be carried out in a chemical fume hood and in appropriate laboratory glassware. Because these reactions are often vigorous, protective safety equipment such as safety goggles, respirator, gloves, face and/or safety shield and other protective equipment must be used.

Initial reactions in a disposal sequence should be carried out on a small scale (5-10g). The reactant concentrations should not exceed 10% of the reaction volume and the final reaction volume should not exceed 50% of the working capacity of the reaction vessel, regardless of the reaction scale. Larger quantities of the material should be handled in several small-size reactions. To ensure completion of reaction, the waste disposal procedure should be run for at least an additional 4 to 8 hours after all materials have been mixed.

All reactions should be run by technically qualified persons familiar with the potential hazards of the chemical reactions.

- A Dissolve or mix the material with a combustible solvent and burn in a chemical incinerator equipped with an afterburner and scrubber.
- B The material should be ignited in the presence of sodium carbonate and slaked lime (calcium hydroxide). The substance should be mixed with vermiculite and then with the dry caustics, wrapped in paper and burned in a chemical incinerator equipped with an afterburner and scrubber.
- C This combustible material may be burned in a chemical incinerator equipped with an afterburner and scrubber.
- D Burn in a chemical incinerator equipped with an afterburner and scrubber but exert extra care in igniting as this material is highly flammable.
- E To a solution of the product in water, add an excess of dilute sulfuric acid. Let stand overnight. Remove any insolubles and bury in a landfill site approved for hazardous-waste disposal.
- F Cautiously dissolve the material in water. Neutralize immediately with sodium carbonate or, if the material does not dissolve completely, add a little hydrochloric acid followed by sodium carbonate. Add calcium chloride in excess of the amount needed to precipitate the fluoride and/or carbonate.

Separate the insolubles and bury in a landfill site approved for hazardous-waste disposal.

- G Under an inert atmosphere, cautiously add the material to dry butanol in an appropriate solvent. The chemical reaction may be vigorous and/or exothermic. Provisions must be made for venting of large volumes of highly flammable hydrogen and/or hydrocarbon gases. Neutralize the solution with aqueous acid. Filter off any solid residues for disposal as hazardous waste. Burn the liquid portion in a chemical incinerator equipped with an afterburner and scrubber.
- H Neutralize the solution and add filtering agent (10g per 100ml). Evaporate the liquid and bag the residual solid for burial in a landfill site approved for hazardous-waste disposal.
- I Dissolve the solid in (or dilute the solution with) a large volume of water. Carefully add a dilute solution of acetic acid or acetone to the mixture in a well ventilated area. Provisions should be made to vent safely the hydrogen gas given off during the decomposition. Check acidity of the solution and adjust to pH 1 if necessary. Let stand overnight. Neutralize the solution (pH 7). Evaporate the solution and bury the residue in a landfill site approved for hazardous-waste disposal.
- J Cautiously acidify a 3% solution or a suspension of the material to pH 2 with sulfuric acid. Gradually add a 50% excess of aqueous sodium bisulfite with stirring at room temperature. An increase in temperature indicates that a reaction is taking place. If no reaction is observed on the addition of 10% of the sodium bisulfite solution, initiate it by cautiously adding more acid. If manganese, chromium, or molybdenum is present, adjust the pH of the solution to 7 and treat with sulfide to precipitate for burial as hazardous waste. Destroy excess sulfide, neutralize and flush solution down the drain.
- K Please contact the Technical Services Department. Be sure to mention name, catalog number and quantity of the material.
- L The material should be dissolved in 1) water; 2) acid solution or 3) oxidized to a water-soluble state. Precipitate the material as the sulfide, adjusting the pH of the solution to 7 to complete precipitation. Filter the insolubles and dispose of them in a hazardous-waste site. Destroy any excess sulfide with sodium hypochlorite. Neutralize the solution before flushing down the drain.
- M A slurry of the arenediazonium salt with water can be disposed of by adding it gradually to a stirred solution of 5-10% excess 2-naphthol in 3% aqueous sodium hydroxide at 0-20°C. After 12 hours, the resulting azo dye is filtered and either incinerated or buried in a landfill site approved for hazardous-waste disposal. Neutralize the remaining solution before disposal.
- N For small quantities: cautiously add to a large stirred excess of water. Adjust the pH to neutral, separate any insoluble solids or liquids and package them for hazardous-waste disposal. Flush the aqueous solu-

tion down the drain with plenty of water. The hydrolysis and neutralization reactions may generate heat and fumes which can be controlled by the rate of addition.

- O Bury in a landfill site approved for the disposal of chemical and hazardous waste.
- P Material in the elemental state should be recovered for reuse or recycling.
- Q Cautiously make a 5% solution of the material in water or dilute acid. There may be a vigorous, exothermic reaction and fumes may be generated due to the hydrolysis of the material. Control any reaction by cooling and by the rate of addition of the material. Gradually add dilute ammonium hydroxide to pH 10. Filter off any precipitate for disposal in a chemical landfill. If there is no precipitation, gradually adjust the pH from 10 to 6, stopping when precipitation occurs.
- R Catalysts and expensive metals should be recovered for reuse or recycling.
- S Treat a dilute basic solution (pH 10-11) of the material with a 50% excess of commercial laundry bleach. Control the temperature by the addition rate of bleach and adjust pH if necessary. Let stand overnight. Cautiously adjust solution to pH 7. Vigorous evolution of gas may occur. Filter any solids for burial in a chemical landfill. Precipitate any heavy metals by addition of sulfide and isolate for burial. Additional equivalents of hypochlorite may be needed if the metal can be oxidized to a higher valence state. For metal carbonyls, the reaction should be carried out under nitrogen.
- T Cautiously make a 5% solution of the product in water; vent because of possible vigorous evolution of flammable hydrogen gas. Acidify the solution to pH 1 by adding 1M sulfuric acid dropwise. Acidification will cause vigorous evolution of hydrogen gas. Allow the solution to stand overnight. Evaporate the solution to dryness and bury the residue in a landfill site approved for hazardous-waste disposal.
- U Take the material (or a solution) and make a 5% solution in tetrahydrofuran. Cautiously add the solution dropwise to an ice-cooled, stirred basic solution of commercial bleach. Oxidation may release flammable hydrocarbon gases which must be vented. Let stand overnight. Adjust the pH to 7 and destroy excess hypochlorite with sodium bisulfite before disposal of the solution.
- V Under an inert atmosphere cautiously add dry butanol or a mixture of dry butanol in an appropriate solvent, to a solution of the material in tetrahydrofuran. The chemical reaction may be vigorous and/or exothermic. Provisions must be made for the venting of a large volume of flammable hydrogen gas. When gas evolution ceases, cautiously add a basic hypochlorite solution dropwise to the reaction solution. Let stand overnight. Neutralize the solution and treat with sodium bisulfite to destroy any excess hypochlorite. Filter any solids for burial in a landfill site approved for hazardous-waste disposal.

# THE SIGMA-ALDRICH LIBRARY OF CHEMICAL SAFETY DATA

## Explanation of Codes

### PROCEDURES FOR SPILLS OR LEAKS

- 1 Absorb on sand or vermiculite and place in closed container for disposal.
- 2 Cover with dry lime, sand, or soda ash. Place in covered containers using nonsparking tools and transport outdoors.
- 3 Shut off all sources of ignition.
- 4 Evacuate area.
- 5 Cover with an activated carbon adsorbent, take up and place in closed container. Transport outdoors.
- 6 Ventilate area and wash spill site after material pickup is complete.
- 7 Sweep up, place in a bag and hold for waste disposal.
- 8 Avoid raising dust.
- 9 Wear self-contained breathing apparatus, rubber boots and heavy rubber gloves.
- 10 Wear respirator, chemical safety goggles, rubber boots and heavy rubber gloves.
- 11 Cover with dry lime or soda ash, pick up, keep in a closed container and hold for waste disposal.
- 12 Carefully sweep up and remove.
- 13 Flush spill area with copious amounts of water.
- 14 Mix with solid sodium bicarbonate.
- 15 Place in appropriate container.
- 16 Wear protective equipment.
- 17 Wash spill site with soap solution.
- 18 Please contact the Technical Services Department. Be sure to mention the name and catalog number of the material.

### FIRE-EXTINGUISHING MEDIA

- 1 Carbon dioxide.
- 2 Dry chemical powder.
- 3 Water spray.
- 4 Alcohol or polymer foam.
- 5 Class D fire-extinguishing material only.
- 6 Water may be effective for cooling, but may not effect extinguishment.
- 7 Carbon dioxide, dry chemical powder, alcohol or polymer foam.
- 8 Foam and water spray are effective but may cause frothing.
- 9 Do not use dry chemical powder extinguisher on this material.
- 10 Do not use carbon dioxide extinguisher on this material.
- 11 Noncombustible.
- 12 Do not use water.
- 13 Use extinguishing media appropriate to surrounding fire condition



# SITE DYSIMETER LOG

PROJECT/PAN # ZTADSI/EILO3195AA SITE NAME Venus Labs

SITE SAFETY OFFICER \_\_\_\_\_ WEEK OF \_\_\_\_\_

NAME AND  
DOSIM. # MONDAY TUESDAY WEDNESDAY THURSDAY FRIDAY SATURDAY SUNDAY

Graczyk							
Rydzewski							
Kulokowski							

To the nearest half-hour, record time spent downrange as "S" (e.g., S:2.5hrs), time spent in active FDS operation as "P", and any time spent downrange in rescue activity as "R".

BS005(2/24/89)



Warehouse Phone (312) 775-7763

## F. EQUIPMENT CHECKLIST

Job/PAN \_\_\_\_\_

Team Leader \_\_\_\_\_

## PROTECTIVE GEAR

<u>Level A</u>	No.	<u>Level B</u>	No.
SCBA		SCBA	
SPARE AIR TANKS		SPARE AIR TANKS	
ENCAPSULATING SUIT (Type _____)		PROTECTIVE COVERALL: Type _____	
SURGICAL GLOVES (Latex)		SM _____ M _____ L _____	
NEOPRENE SAFETY BOOTS		BUTYL APRON	
BOOTIES (Latex)		SURGICAL GLOVES (LATEX)	
GLOVES: Type _____		GLOVES: Type _____	
SM _____ M _____ L _____		SM _____ M _____ L _____	
OUTER WORK GLOVES		NEOPRENE SAFETY BOOTS	
CASCADE SYSTEM		BOOTIES (LATEX)	
5-MINUTE ESCAPE MASK		HARD HAT	
COOLING VEST		FACE SHIELD	
HARD HAT		MANIFOLD SYSTEM WITH AIRLINE	
		CASCADE SYSTEM	
<u>Level C</u>		RAIN SUIT	
ULTRA-TWIN RESPIRATOR		OUTER WORK GLOVES	
POWER AIR PURIFYING RESPIRATOR			
CARTRIDGES (Type _____)		<u>Level D</u>	
PROTECTIVE COVERALL: Type _____		ULTRA-TWIN RESPIRATOR (Available)	
SM _____ M _____ L _____		CARTRIDGES (Type _____)	
BUTYL APRON		5-MINUTE ESCAPE MASK (Available)	
SURGICAL GLOVES (LATEX)		PROTECTIVE COVERALL: Type _____	
GLOVES: Type _____		SM _____ M _____ L _____	
SM _____ M _____ L _____		OUTER WORK GLOVES	
OUTER WORK GLOVES		HARD HAT	
GLOVE LINERS _____		FACE SHIELD	
FACE SHIELD		RAIN SUIT	
HARDHAT		WINTER BOOTS	
RAIN SUIT		BOOTIES (LATEX)	
NEOPRENE SAFETY BOOTS		NEOPRENE SAFETY BOOTS	
BOOTIES (LATEX)		STEEL TOED BOOTS	
STEEL TOED BOOTS		SAFETY GLASSES	

INSTRUMENTATION	No.	DECON EQUIPMENT	No.
OVA		WASH TUBS	
THERMAL DESORBER		BUCKETS	
O2/EXPLOSIMETER W/CAL. KIT		SCRUB BRUSHES	
PHOTOVAC TIP		PRESSURIZED SPRAYER	
HMu (Probe <u>10.2</u> OR <u>11.7</u> )		DETERGENT (Type _____)	
MAGNETOMETER		SOLVENT (Type _____)	
PIPE LOCATOR		PLASTIC SHEETING	
WEATHER STATION		TARPS AND POLES	
DRAEGER PUMP, TUBES _____		TRASH BAGS	
BRUNTON COMPASS		TRASH CANS	
MONITOX CYANIDE		MASKING TAPE	
HEAT STRESS MONITOR		DUCT TAPE	
NOISE EQUIPMENT _____		PAPER TOWELS	
PERSONAL SAMPLING PUMPS (Type _____)		FACE MASK SANITIZER	
DUST MONITOR (MDA OR GCA System)		FOLDING CHAIRS	
		STEP LADDERS	
RADIATION EQUIPMENT		DISTILLED WATER	
TLD BADGES			
DOCUMENTATION FORMS			
PORTABLE RATEMETER			
SCALER/RATEMETER		SAMPLING EQUIPMENT	
NaI Probe		80 OZ. AMBER GLASS BOTTLES	
InS Probe		1 L. AMBER GLASS BOTTLES	
GM Pancake Probe		40 ML. VIALS	
GM Side Window Probe		1 L. PLASTIC	
MICRO R METER / RAD-MINI		8 OZ. GLASS	
ION CHAMBER		120 ML. GLASS	
ALERT DOSIMETER		SPOONS	
POCKET DOSIMETER		KNIVES	
		FILTER PAPER	
FIRST AID EQUIPMENT		PERSONAL SAMPLING PUMP SUPPLIES	
FIRST AID KIT		BUCK CALIBRATOR	
OXYGEN ADMINISTRATOR		HAND BAILERS	
STRETCHER		THIEVING RODS WITH BULBS	
PORTABLE EYE WASH		DIOXIN SAMPLE KIT	
BLOOD PRESSURE MONITOR		PRESERVATIVES: HNO3 ____ NaOH ____ Other ____	
FIRE EXTINGUISHER		STRING	

VAN EQUIPMENT	No.	MISCELLANEOUS (Cont.)	No.
TOOL KIT		HEARING PROTECTION	
HYDRAULIC JACK		LIFE VESTS	
LUG WRENCH		WALKIE-TALKIE	
TOW CHAIN		CONDUCTIVITY METER	
VAN CHECK OUT		PH METER	
Gas		CAMERA	
Oil		WATER-LEVEL INDICATOR	
Antifreeze		SPLIT SPOON SAMPLERS	
Battery		PVC HAND PUMP	
Windshield Wash		RESISTIVITY METER	
Tire Pressure		WELL POINT SAMPLER	
		ROBAIR PUMP SYSTEM	
MISCELLANEOUS		THERMOMETER	
CHALK		MASTERFLEX PUMP & FILTER APPARATUS	
LEVEL/TRIPOD AND ROD		SHIPPING EQUIPMENT	
BOWLS		COOLERS	
PITCHER PUMP		PAINT CANS WITH LIDS, 7 CLIPS EACH	
SURVEYOR'S TAPE		VERMICULITE	
100 FIBERGLASS TAPE		DUST MASK	
300 NYLON ROPE		SHIPPING LABELS	
NYLON STRING		DOT LABELS: "DANGER"	
SURVEYING FLAGS		"UP"	
FILM		"INSIDE CONTAINER COMPLIES ..."	
WHEEL BARROW		"HAZARD GROUP"	
BUNG WRENCH		STRAPPING TAPE	
SOIL AUGER		BOTTLE LABELS	
PICK		BAGGIES	
SHOVEL		CUSTODY SEALS	
CATALYTIC HEATER		CHAIN-OF-CUSTODY FORMS	
PROPANE GAS		FEDERAL EXPRESS FORMS	
BANNER TAPE		CLEAR PACKING TAPE	
SURVEYING METER STICK			
CHAINING PINS & RING			
TABLES			
WEATHER RADIO			
BINOCULARS			
MEGAPHONE			



**SITE SAFETY MEETING**  
(Must be filled out by Site Safety Officer at the site)

Project \_\_\_\_\_ TDD: \_\_\_\_\_ PAN #: \_\_\_\_\_  
Site Safety Officer : \_\_\_\_\_ Date \_\_\_\_\_ Time \_\_\_\_\_  
Address: \_\_\_\_\_  
Type of Work: \_\_\_\_\_

**SAFETY TOPICS PRESENTED**

Protective Clothing/Equipment: \_\_\_\_\_

Chemical Hazards: \_\_\_\_\_

Physical Hazards: \_\_\_\_\_

Radiation Hazards: \_\_\_\_\_

Emergency Procedures: \_\_\_\_\_

Hospital/Clinic: \_\_\_\_\_ Telephone: \_\_\_\_\_

Hospital Address: \_\_\_\_\_ Emergency Telephone #: \_\_\_\_\_

Special Equipment: \_\_\_\_\_

Others: \_\_\_\_\_

**Checklist**

1. Emergency information reviewed? Y / N and made familiar to all team members? Y / N
2. Route to nearest hospital explained and reviewed? Y / N and its location known to all team members? Y / N
3. Site safety plan readily available and its location known to all team members? Y / N

The site safety meeting shall be attended by all personnel who will be working within the site area. Daily informational update meetings will be held when site tasks and conditions change.

**ATTENDANCE**

PRINT NAME
<u>Lisa Graetzky</u>
<u>Karen Rydzewski</u>
<u>MICHAEL KULIKOWSKI</u>
_____
_____
_____

SIGNATURE	DATE
<u>Lisa Graetzky</u>	<u>8-3-93</u>
<u>Karen Rydzewski</u>	<u>8-3-93</u>
<u>Michael Kulikowski</u>	<u>8/3/93</u>
_____	_____
_____	_____
_____	_____

MEETING CONDUCTED BY: \_\_\_\_\_

ECOLOGY AND ENVIRONMENT, INC. - CHICAGO

Site Name: \_\_\_\_\_ PAN/TDD#: \_\_\_\_\_  
 Date: \_\_\_\_\_ Wind Direction: \_\_\_\_\_ Weather: \_\_\_\_\_

EQUIPMENT	ID#	CALIB./OPER. CHECK	INITIALS & DATE	BACKGROUND READING	ON-SITE READING
OVA					
HNu					
Photovac Tube					
O2 Meter					
Exposimeter					
Combo-meter					
Rad-MINI					
Monitor-4					
Draeger tubes					
Monitox					
OTHERS:					

Attendees at Site: \_\_\_\_\_

Protective Clothing Worn: \_\_\_\_\_

Comments on Monitoring or Protective Clothing (ex: Was the monitoring equipment possibly effected by the weather?) \_\_\_\_\_  
 \_\_\_\_\_  
 \_\_\_\_\_

Team Leader \_\_\_\_\_  
 (Print Name) (Signature) (Date)

Site Safety Officer \_\_\_\_\_  
 (Print Name) (Signature) (Date)

Please submit the original to Ron Bugg and a copy to the project file

**Vehicle Safety Checklist**  
**Ecology & Environment, Inc.**  
**Chicago Office**

Date: \_\_\_\_\_ Time: \_\_\_\_\_ Odometer: \_\_\_\_\_  
Vehicle Model: \_\_\_\_\_ Color: \_\_\_\_\_ License Plate No. \_\_\_\_\_

**INTERIOR:**

\_\_\_\_\_ All Safety Belts-Proper Locking  
\_\_\_\_\_ Parking Brake

**START ENGINE:**

\_\_\_\_\_ Oil Pressure  
\_\_\_\_\_ Instrument Panel  
\_\_\_\_\_ (Warning Lights or Buzzers)  
\_\_\_\_\_ Horn  
\_\_\_\_\_ Windshield Wiper & Washer  
\_\_\_\_\_ Heater/Defroster  
\_\_\_\_\_ Mirrors  
\_\_\_\_\_ Steering (Loose)  
\_\_\_\_\_ Interior Lights  
\_\_\_\_\_ Emergency Flashers  
\_\_\_\_\_ Starts Properly

**FRONT:**

\_\_\_\_\_ Headlights (Dim/Bright)  
\_\_\_\_\_ Turn Signals  
\_\_\_\_\_ Emergency Flashers

**REAR:**

\_\_\_\_\_ Tail Lights  
\_\_\_\_\_ Brake Lights  
\_\_\_\_\_ Back up Lights  
\_\_\_\_\_ Turn Signals  
\_\_\_\_\_ Emergency Flashers

**MECHANICAL OPERATION:**

\_\_\_\_\_ Engine (misses, knocks, etc.)  
\_\_\_\_\_ Check Oil  
\_\_\_\_\_ Water/Anti-freeze  
\_\_\_\_\_ Wiper Fluid  
\_\_\_\_\_ Brake Fluid

**OUTSIDE:**

\_\_\_\_\_ Tires (properly inflated)  
\_\_\_\_\_ Gas Tank Cap

**EMERGENCY EQUIPMENT:**

\_\_\_\_\_ Fire Extinguisher  
\_\_\_\_\_ First Aid Kit  
\_\_\_\_\_ Flags, Flares,  
\_\_\_\_\_ Spare tire (properly inflated)  
\_\_\_\_\_ Tire Changing Kit  
\_\_\_\_\_ (jack, tools, etc.)

**REMARKS:**

\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**TEAM MEMBER/OPERATOR:** \_\_\_\_\_ / \_\_\_\_\_

(print name)

signature

**SITE NAME/ADDRESS:** \_\_\_\_\_

**PAN/JOB NUMBER:** \_\_\_\_\_

**RETURN OF VEHICLE TO DUTY STATION**

**Vehicle Cleanliness:** \_\_\_\_\_

**Remarks:** \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**Corrections Necessary:** \_\_\_\_\_  
\_\_\_\_\_  
\_\_\_\_\_

**TEAM MEMBER/OPERATOR:** \_\_\_\_\_ / \_\_\_\_\_

(print name)

signature

Date: \_\_\_\_\_ Time: \_\_\_\_\_ Odometer: \_\_\_\_\_